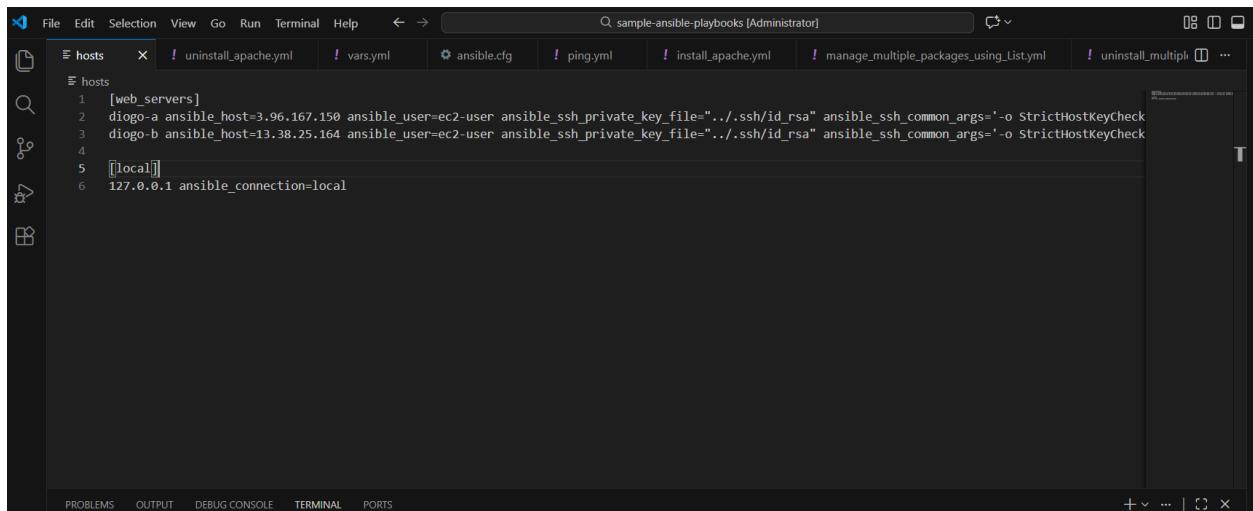


LAB | Lists and Dictionaries in Ansible Playbooks

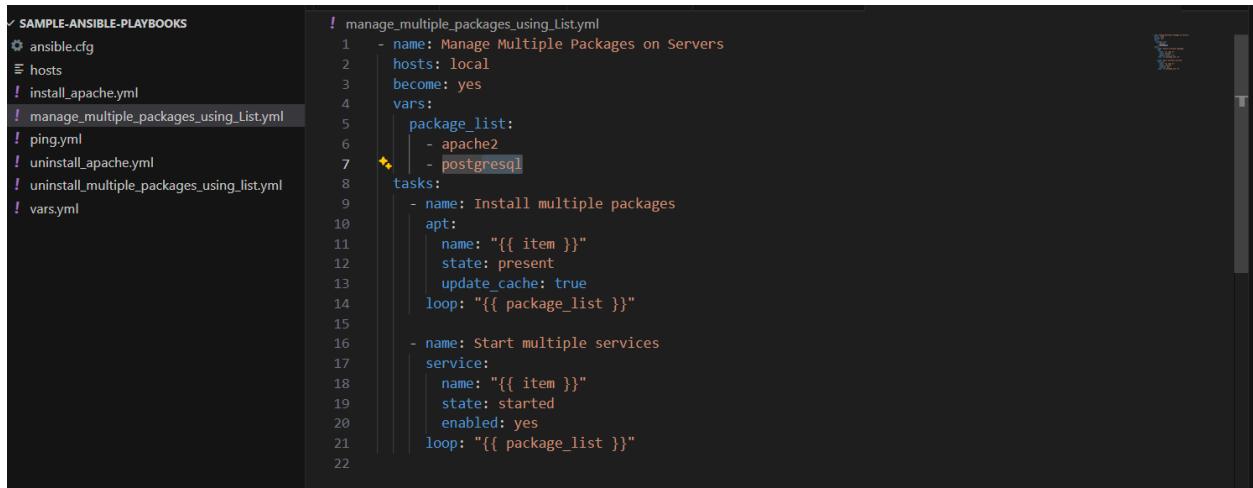


A screenshot of the Visual Studio Code interface. The title bar says "sample-ansible-playbooks [Administrator]". The left sidebar shows a tree view with "hosts" selected. The main editor area contains the following YAML code:

```
hosts
  [web_servers]
  1 diogo-a ansible_host=3.96.167.150 ansible_user=ec2-user ansible_ssh_private_key_file=".../.ssh/id_rsa" ansible_ssh_common_args='-o StrictHostKeyCheck
  2 diogo-b ansible_host=13.38.25.164 ansible_user=ec2-user ansible_ssh_private_key_file=".../.ssh/id_rsa" ansible_ssh_common_args='-o StrictHostKeyCheck
  3
  4
  5 [[local]]
  6 127.0.0.1 ansible_connection=local
```

The bottom navigation bar includes "PROBLEMS", "OUTPUT", "DEBUG CONSOLE", "TERMINAL", and "PORTS".

Task 1: Using Lists as Variables



A screenshot of the Visual Studio Code interface. The title bar says "SAMPLE-ANSIBLE-PLAYBOOKS". The left sidebar shows a tree view with "manage_multiple_packages_using_list.yml" selected. The main editor area contains the following YAML code:

```
manage_multiple_packages_using_list.yml
  - name: Manage Multiple Packages on Servers
    hosts: local
    become: yes
    vars:
      package_list:
        - apache2
        - postgresql
    tasks:
      - name: Install multiple packages
        apt:
          name: "{{ item }}"
          state: present
          update_cache: true
        loop: "{{ package_list }}"
      - name: Start multiple services
        service:
          name: "{{ item }}"
          state: started
          enabled: yes
        loop: "{{ package_list }}"
```

```
vijayagagla@DESKTOP-FP4OP26:~/sample-ansible-playbooks$ ansible-playbook manage_multiple_packages_using_List.yml

PLAY [Manage Multiple Packages on Servers] ****
TASK [Gathering Facts] ****
ok: [127.0.0.1]

TASK [Install multiple packages] ****
changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)

TASK [Install multiple packages] ****
changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)

TASK [Start multiple services] ****
changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)
changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)
changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)

changed: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)

changed: [127.0.0.1] => (item=postgresql)

TASK [Start multiple services] ****
TASK [Start multiple services] ****
ok: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)
ok: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)
```

```
TASK [Start multiple services] ****
TASK [Start multiple services] ****
ok: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)
ok: [127.0.0.1] => (item=apache2)
changed: [127.0.0.1] => (item=postgresql)
changed: [127.0.0.1] => (item=postgresql)

PLAY RECAP ****
127.0.0.1 : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

vijayagagla@DESKTOP-FP4OP26:~/sample-ansible-playbooks$ ]
```

Task 2: Using Dictionaries as Variables

```

File Edit Selection View Go Run Terminal Help ← → Sie befinden sich in der gemeinsamen Bildschirmfreigabe! Freigabe stoppen
EXPLORER SAMPLE-ANSIBLE-PLAYBOOKS
hosts
install_apache.yml
manage_multiple_packages_using_dictionary.yml
ping.yml
uninstall_apache.yml
uninstall_multiple_packages_using_list.yml
vars.yml
manage_multiple_packages_using_list.yml
ping.yml
uninstall_apache.yml
vars.yml
manage_multiple_packages_using_dictionary.yml
1 manage_multiple_packages_using_dictionary.yml
2 hosts: local
3 become: yes
4 vars:
5 package dict:
6 webserver:
7 pkg: apache2
8 svc: apache2
9 db:
10 pkg: mariadb-server
11 svc: mariadb
12 tasks:
13 - name: Manage Services on Multiple Servers
14   apt:
15     name: "{{ item.value.pkg }}"
16     state: present
17     update_cache: true
18   loop: "{{ package_dict | dict2items }}"
19   - name: start multiple services from dictionary
20     service:
21       name: "{{ item.value.svc }}"
22       state: started
23       enabled: yes
24     loop: "{{ package_dict | dict2items }}"
Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.
SUGGESTED ACTIONS
Build Workspace
Show Config
POBLEMS OUTPUT DEBUG CONSOLE TERMINAL PORTS
apache2.service - The Apache HTTP Server
Loaded: loaded (/usr/lib/systemd/system/apache2.service; enabled; preset: enabled)
Active: active (running) since Wed 2026-01-28 17:14:51 CET; 4min 50s ago
  Docs: https://httpd.apache.org/docs/2.4/
Main PID: 49414 (apache2)
Tasks: 55 (limit: 14184)
Memory: 17.1M
CGroup: /system.slice/apache2.service
        └─49414 /usr/sbin/apache2 -k start
vijayagagla@DESKTOP-FP4OP26:~/sample-ansible-playbooks$ ansible-playbook manage_multiple_packages_using_dictionary.yml
vijayagagla@DESKTOP-FP4OP26:~/sample-ansible-playbooks$ ansible-playbook manage_multiple_packages_using_dictionary.yml
vijayagagla@DESKTOP-FP4OP26:~/sample-ansible-playbooks$ ansible-playbook manage_multiple_packages_using_dictionary.yml
PLAY [Manage Services on Multiple Servers] ****
TASK [Gathering Facts] ****
ok: [127.0.0.1]
TASK [Install multiple packages from dictionary] ****
ok: [127.0.0.1] => {"item": {"key": "webserver", "value": {"pkg": "apache2", "svc": "apache2"}}}
changed: [127.0.0.1] => {"item": {"key": "db", "value": {"pkg": "mariadb-server", "svc": "mariadb"}}}
TASK [Start multiple services from dictionary] ****
ok: [127.0.0.1] => {"item": {"key": "webserver", "value": {"pkg": "apache2", "svc": "apache2"}}}
ok: [127.0.0.1] => {"item": {"key": "db", "value": {"pkg": "mariadb-server", "svc": "mariadb"}}}
PLAY RECAP ****
127.0.0.1 : ok=3    changed=1    unreachable=0    failed=0    skipped=0    rescued=0    ignored=0

```

On Remote Servers:

Sie befinden sich in der gemeinsamen Bildschirmzumming Freigabe stoppen

EXPLORER

- SAMPLE-ANSIBLE-PLAYBOOKS
 - ansible.cfg
 - hosts
 - install_apache.yml
 - manage_multiple_packages_using_dictionary.yml
 - ping.yml
 - uninstall_apache.yml
 - uninstall_multiple_packages_using_list.yml
 - vars.yml

hosts

```
! manage_multiple_packages_using_dictionary.yml ✘ ! uninstall_apache.yml ✘ ! vars.yml ✘ an ... CHAT + - Es spricht:
```

```

! manage_multiple_packages_using_dictionary.yml
1 - name: Manage Services on Multiple Servers
2 hosts: web_servers
3 become: yes
4 vars:
5   package_dict:
6     webserver:
7       pkg: httpd
8       svc: httpd
9     db:
10    pkg: mariadb105-server
11    svc: mariadb
12 tasks:
13   - name: Install multiple packages from dictionary
14     dnf:
15       name: "{{ item.value.pkg }}"
16       state: present
17       update_cache: true
18     loop: "{{ package_dict | dict2items }}"
19   - name: Start multiple services from dictionary
20     service:
21       name: "{{ item.value.svc }}"
22       state: started
23       enabled: yes
24     loop: "{{ package_dict | dict2items }}"

```

Build with Agent
AI responses may be inaccurate.
Generate Agent Instructions to onboard AI onto your codebase.

vijayagagla@DESKTOP-FP40P26:~/sample-ansible-playbooks\$ ansible-playbook manage_multiple_packages_using_dictionary.yml

```

PLAY [Manage Services on Multiple Servers] ****
TASK [Gathering Facts] ****
[WARNING]: Platform linux on host diogo-b is using the discovered Python interpreter at /usr/bin/python3.9, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.16/reference_appendices/interpreter_discovery.html for more information.
ok: [diogo-b]
[WARNING]: Platform linux on host diogo-a is using the discovered Python interpreter at /usr/bin/python3.9, but future installation of another Python interpreter could change the meaning of that path. See https://docs.ansible.com/ansible-core/2.16/reference_appendices/interpreter_discovery.html for more information.
ok: [diogo-a]

TASK [Install multiple packages from dictionary] ****
ok: [diogo-b] => (item={'key': 'webserver', 'value': {'pkg': 'httpd', 'svc': 'httpd'}})
ok: [diogo-a] => (item={'key': 'webserver', 'value': {'pkg': 'httpd', 'svc': 'httpd'}})
changed: [diogo-b] => (item={'key': 'db', 'value': {'pkg': 'mariadb105-server', 'svc': 'mariadb'}})
ok: [diogo-a] => (item={'key': 'db', 'value': {'pkg': 'mariadb105-server', 'svc': 'mariadb'}})

TASK [Start multiple services from dictionary] ****
ok: [diogo-b] => (item={'key': 'webserver', 'value': {'pkg': 'httpd', 'svc': 'httpd'}})
changed: [diogo-b] => (item={'key': 'db', 'value': {'pkg': 'mariadb105-server', 'svc': 'mariadb'}})
changed: [diogo-b] => (item={'key': 'db', 'value': {'pkg': 'mariadb105-server', 'svc': 'mariadb'}})
ok: [diogo-a] => (item={'key': 'webserver', 'value': {'pkg': 'httpd', 'svc': 'httpd'}})
ok: [diogo-a] => (item={'key': 'db', 'value': {'pkg': 'mariadb105-server', 'svc': 'mariadb'}})

PLAY RECAP ****
diogo-a : ok=3    changed=0    unreachable=0    failed=0    skipped=0    rescued=0
          ignored=0
diogo-b : ok=3    changed=2    unreachable=0    failed=0    skipped=0    rescued=0
          ignored=0

```

