WORKFLOW

EXAMPLES

set up deployment computer

determine what machines you want in your distributed system

invent credentials and secrets

setup ansible file structure on deployment computer

entry /
  ensure you are in your deployment directory

example:
$ cd ~/miros_rabbitmq_deployment

Setup Ansible Directory Structure

entry/
  # create a global_var folder with your inventory name as a subdirectory
  # in this inventory named subdirectory create a vars file

  # create a template directory

example
mkdir group_vars
mkdir ./group_vars/scotty
touch ./group_vars/scotty/var
mkdir templates

.
group_vars
  miros-rabbitmq
    vars
templates

Setup global variables used for all computers in your distributed system

Encrypt credentials and secrets in vault

entry/
  move your fake_vault into your ./groups_var/<inventory_name> directory
  change its name to vault
  encrypt it using `ansible-vault encrypt`
  cat it to see it is encrypted
  confirm you can open it with `ansible-vault edit`

example:
$ mv fake_vault ./global_vars/scotty/vault
$ ansible-vault encrypt ./global_vars/miros-rabbitr

Directory structure now
.
group_vars
  miros-rabbitmq
    vars
    vault
templates

example:
$ cat ./global_vars/miros-rabbitmq/vault

$ANSIBLE_VAULT;1.1;AES256
34363736353133336561626464646437613...

Note..
If you see something like this you
can add your vault to your
revision control system

Note..
Remember this secret
Also, there are ways to use a password file
search "ansible vault password file"

example:
$ ansible-vault edit ./global_vars/miros_rabbitmq/vault

---
vault_MESH_ENCRYPTION_KEY: 'u3Uc-qAi9iiCv3fkBfRUAKrM1gH8w51-nVU8M8A73Jg='
vault_SNOOP_TRACE_ENCRYPTION_KEY: 'u3Uc-qAi9iiCv3fkBfRUAKrM1gH8w51-nVU8M8A73Jg='
vault_SNOOP_SPY_ENCRYPTION_KEY: 'u3Uc-qAi9iiCv3fkBfRUAKrM1gH8w51-nVU8M8A73Jg='
vault_RABBIT_HEARTBEAT_INTERVAL: 3600
vault_CONNECTION_ATTEMPTS: 3
vault_RABBIT_USER: peter
vault_RABBIT_PASSWORD: rabbit
vault_RABBIT_PORT: 5672
vault_RABBIT_GUEST_PASSWORD: rabbit567

Add var file

entry/
  add a var (yaml) file to your global_vars/<inventory>/
  add the required variables:
    rabbit_user -> vault
    rabbit_password -> vault
    rabbit_heart_beat_interval -> vault
    connection_attempts -> vault
    rabbit_tags
    rabbit_guest_password -> vault
    rabbit_heart_beat_interval
    mesh_encryption_key -> vault
    snoop_trace_encryption_key -> vault
    snoop_spy_encryption_key -> vault

example:
$ touch ./global_vars/miros-rabbitmq/var

example vars file:
---
public
python_packages_to_install:
  - miros-rabbitmq
rabbit_tags:
 - administrator

Note..
this creates public variable names
with secrect contents

secrets
rabbit_user: "{{ vault_RABBIT_USER }}"
rabbit_password: "{{ vault_RABBIT_PASSWORD }}"
rabbit_port: "{{ vault_RABBIT_PORT }}"
rabbit_heartbeat_interval: "{{ vault_RABBIT_HEARTBEAT_INTERVAL }}"
connection_attempts: "{{ vault_CONNECTION_ATTEMPTS }}"
rabbit_guest_password: "{{ vault_RABBIT_GUEST_PASSWORD }}"
mesh_encryption_key: "{{ vault_MESH_ENCRYPTION_KEY }}"
snoop_trace_encryption_key: "{{ vault_SNOOP_TRACE_ENCRYPTION_KEY }}"
snoop_spy_encryption_key: "{{ vault_SNOOP_SPY_ENCRYPTION_KEY }}"
rabbit_heart_beat_interval: "{{ vault_RABBIT_HEARTBEAT_INTERVAL }}"

determine where you want your software on your machines

entry /
  determine where you want your miros-rabbitmq working files to be
  this will be assigned to

  miros_rabbitmq_project_directory in your playbook

example:
  miros_rabbitmq_project_directory: '~/miros-rabbitmq'

add template files

entry /
  create ./templates/rabbit-env.conf.j2 # will tell rabbit where to find it's config
  create ./templates/rabbit.config.j2   # the RabbitMQ config template
  create ./templates/.env.j2   # will contain all the secrets needed for your miros-rabbitmq to work
  create ./templates/.miros_rabbitlan_cache.json.j2 # the empty lan cache file
  create ./templates/.miros_rabbit_hosts.json.j2   # describes addresses of other nodes in your system

example ./templates/rabbit-env.conf.j2 file:
RABBITMQ_CONFIG_FILE=/etc/rabbitmq/rabbitmq
NODE_IP_ADDRESS=0.0.0.0

example ./templates/rabbit-config.j2 file:
[
  {rabbit,
    [
      {loopback_users,[]}
    ]
  }
].

example ./templates/.env.j2 file:

MESH_ENCRYPTION_KEY={{mesh_encryption_key}}
SNOOP_TRACE_ENCRYPTION_KEY={{snoop_trace_encryption_key}}
SNOOP_SPY_ENCRYPTION_KEY={{snoop_spy_encryption_key}}
RABBIT_USER={{rabbit_user}}
RABBIT_PASSWORD={{rabbit_password}}
RABBIT_PORT={{rabbit_port}}
RABBIT_HEARTBEAT_INTERVAL={{rabbit_heart_beat_interval}}
CONNECTION_ATTEMPTS={{connection_attempts}}
RABBIT_GUEST_USER={{rabbit_guest_user}}

create playbook

entry /
  create ./miros_rabbitmq_install.yml
  add your miros_rabbit_project_directory at the top of the file

example ./templates/.miros_rabbitlan_cache.json.j2
{
  "addresses": [
  ],
  "amqp_urls": [
  ],
  "time_out_in_minutes": 0
}

Directory structure now
.
group_vars
  miros-rabbitmq
    vars
    vault
templates
  .env.j2
  .miros_rabbitlan_cache.json
  .miros_rabbit_hosts.json
  rabbitmq.config.j2
  rabbitmq-env.conf.j2

Directory structure now:
.
group_vars
  scotty
    vars
    vault
miros_rabbitmq_install.yml
templates
  .env.j2
  .miros_rabbitlan_cache.json
  .miros_rabbit_hosts.json
  rabbitmq.config.j2
  rabbitmq-env.conf.j2

example ./templates/.miros_rabbit_hosts.json.j2
{
  "hosts": [
  {% for host in ansible_play_batch %}
  "{{ host }}"{% if not loop.last %},{% endif %}
  {% endfor %}

  ]
}

example ./miros_rabbitmq_install.yml

- hosts: miros-rabbitmq
  vars:
    miros_rabbitmq_project_directory: '~/miros-rabbitmq'
  tasks:
   - name: Install rabbitmq-server
     become: true
     apt: name={{ item }} state=present update_cache=false
     with_items:
       - erlang
       - rabbitmq-server
  .
  .
  .

deploy your infrastructure, credentials and secret to all machines