

Ansible Environment

To use Ansible, generally you create a “playbooks” directory in your /home/user/, then get the following filesystem inside :

```

playbooks:-> <role_name>.yaml (Playbooks to run, often matches the name of a
single role you want to run, or
|
|         another when you run several roles)
|-> inventory.ini (List of all servers to run playbooks on, with
host specific variables)
|-> isc_compute.ini (Chacha Disco and Tango for example)
|-> labs.ini (Calypso lab nodes)
|-> test.ini (Custom list for testing)
|-> users.yaml (The main source for users IDs and assignation
of groups, since we don't have access
|
|         to the HES LDAP to manage groups ourselves
there. Contains UID/GID, shell and pass
|
|         only for the default/rescue user)
|-> ansible.cfg (Ansible local configuration for your user :
python interpreter version for example)
|
L-> roles:-> <rolename>:
|
|         L-> files: (Contains all files needed
for your playbook, ansible checks this
|         |         directory first when you
reference a file)
|         |         L-> authorized_keys/remi.key
|         |         L-> remi_home.tar.gz
|
|         L-> handlers: (Small repetitive tasks to
be called in a playbook, like restart a
|         |         systemd service)
|         |         L->
restart_mysql_then_apache.yaml
|
|         L-> tasks: (Main dir for all tasks to
run)
|         |         L-> main.yaml (The first task
called when the role is run)
|         |         L-> isc3.yaml (Supplementary
tasks you can call in your main task)
|
|         L-> vars:
|         |         L-> Specific variable file for the
role

```

Ansible is made to run all playbooks using this “playbooks” dir as your working directory. From there all relative paths works as intended.

Ansible playbooks

For now that we don't really have a server for this purpose, I'm using my laptop to deploy configurations using Ansible. (Remi)

```
playbooks:-> <role_name>.yaml (Playbooks to run)
  |-> inventory.ini (List of all servers to run playbooks on)
  |-> isc_compute.ini (Chacha and Disco for example)
  |-> labs.ini (Calypso nodes)
  |-> test.ini (Custom list)
  |-> users.yaml (The main source for users IDs and assignation
of groups, since we don't have access
  | to the HES LDAP to manage groups ourselves
there. Contains UID/GID, shell and pass
  | only for the default/rescue user)
  |
  L-> roles:-> calypso-sys: (Configures all calypso worker nodes,
with all
  | users, software, and system configs)
  |-> isc_compute: (Configures Disco and Chacha users,
software and system configs)
  |-> julia: (Installs Julia for a user, since
there are no system-wide install)
  |-> k8s: (Configures Kubernetes on all Calypso
nodes)
  |-> learn (TODO: Started a playbook to configure
from scratch a webserver with all
  | Moodle prerequisites, to rebuild
Hannibal in minutes)
  |-> master-sys: (Configures system configs specific on
calypsomaster only)
  |-> munge: (Needed to authenticate SLURM nodes on
Calypso and ISC Compute)
  |-> nvidia-cuda: (Needed to allow servers to use Nvidia
GPUs)
  |-> prometheus: (Empty, TODO : Installs prometheus
exporters and server, separate in 2
  | playbooks)
  |-> rumba-sys: (Configures rumba master, with all
  | users, software, and system configs)
  |-> slurm_research_TODO: (Empty, TODO : redo all
installation part from compilation
  | install, separate install from
config)
  |-> slurm_calypso: (Empty, TODO : redo all installation
part from compilation
  | install, separate install from
config)
```

```

    |-> slurm_calypso_old : (Old installation of SLURM using
ubuntu outdated packages)
    L-> vps:                (Installs or checks base system
config / users for Hannibal/Hasdrubal)

```

Ansible roles

Calypso-sys

Manages all Calypso lab servers configurations.

```

calypso-sys/-> tasks/-> main.yml    (All tasks to configure timezone, system
umask, groups and users, default user,
    |          |                    base packages, ssh keys deployment, NFS
homes configs, symlinks in each home,
    |          |                    fastfetch install, systemd tweaks to
fasten boot time, set /etc/hosts entries,
    |          |                    put sudoers files, install Apptainer,
then run isc[1,2,3].yaml tasks )
    |          |-> root.yml          (Specific root user configuration)
    |          |-> iscx.yml          (Configures students accounts for
isc[1,2,3] class)
    |          |-> files/-> authorized_keys/-> user.name (SSH public keys to
deploy for each user)
    |          |                    |
    |          |                    |-> admin_user_home_config/ (Containing configs
like .zshrc, .config/ and .oh-my-zsh/ )
    |          |                    |
    |          |                    |-> sudoers.d/username      (Containing sudoers
specific files for a user, without
                                                                    dot in the name)

```

From: <https://wiki.isc-vs.ch/> - **The ISC wiki**

Permanent link: <https://wiki.isc-vs.ch/doku.php?id=administratif:tooling:ansible&rev=1758890060>

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