

# Ansible Puppet

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Astra Linux . [Astra Linux](#)



:

- Astra Linux Common Edition 2.12.26

: master.astra.lan 192.168.230.10

: agent1.astra.lan 192.168.230.11

IP- [/etc/hosts](#). [DNS](#)-.

## Ansible

### 1. Ansible

```
sudo apt install ansible
```

### 2. inventory-

inventory- **hosts** [/etc/ansible/](#).



inventory- **`$ANSIBLE_HOSTS`**, **`-i`** **ansible** **ansible-playbook**

:

```
[agents]
agent1.astra.lan ansible_ssh_host=192.168.230.11
```

### 3. ssh-

```
ssh-keygen -t rsa -b 4096
ssh-copy-id user@192.168.230.11
```

### 4.

```
ansible -m ping agents
```

```
agent1.astra.lan | SUCCESS => {
  "changed": false,
  "ping": "pong"
}
```

## 5.

puppet- :

1. /usr/share/puppet/modules:

```
sudo mkdir -p /usr/share/puppet/modules
```

2. /etc/puppetlabs/code/environments/production/environment.conf, :

```
modulepath = /usr/share/puppet/modules:./modules:$basemodulepath
```

3. , :

```
sudo /opt/puppetlabs/bin/puppet apply --configprint modulepath
```

4. , :

```
sudo /opt/puppetlabs/bin/puppet config print modulepath --section  
master --environment production
```

## NTP Ansible

### 1.

```
sudo apt install ansible-role-geerlingguy-ntp
```

### 2. Ansible- *configure\_ntp.yml*

**configure\_ntp.yml**

```
---  
- hosts: all  
  become: yes  
  roles:  
    - role: geerlingguy.ntp  
    vars:  
      ntp_timezone: Europe/Moscow  
      ntp_manage_config: true  
      ntp_servers:  
        - "ntp1.vniiftri.ru iburst"  
        - "0.ru.pool.ntp.org iburst"  
        - "1.ru.pool.ntp.org iburst"  
        - "2.ru.pool.ntp.org iburst"  
        - "3.ru.pool.ntp.org iburst"
```

. :

ntp_enabled	true/false	true	ntp .
ntp_timezone	<string>	Etc / UTC	
ntp_package	ntp/chrony	ntp	, NTP.
ntp_config_file	<string>	/etc/ntp.conf	NTP. RHEL / CentOS 7 etc/chrony.conf

<b>ntp_manage_config</b>	true/false	false	NTP
<b>ntp_area</b>	<string>		NTP Pool Area
<b>ntp_servers</b>	<list>	- "0 {{ '.' + ntp_area, ntp_area else '' }}. pool.ntp.org iburst " - "1 {{ '.' + ntp_area, ntp_area else '' }}. pool.ntp.org iburst " - "2 {{ '.' + ntp_area, ntp_area else '' }}. pool.ntp.org iburst " - "3 {{ '.' + ntp_area, ntp_area else '' }}. pool.ntp.org iburst "	NTP . , NTP.
<b>ntp_restrict</b>	<list>	- "127.0.0.1" - "::: 1"	NTP .
<b>ntp_cron_handler_enabled</b>	true/false	false	cron
<b>ntp_tinker_panic</b>	true/false	true	«» ntp.

### 3.

```
ansible-playbook configure_ntp.yml
```

```
PLAY [all]
*****

TASK [setup]
*****
ok: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : set time zone]
*****
ok: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : remove unneeded ntp clients]
*****
changed: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : install systemd]
*****
ok: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : configure systemd-timesyncd]
*****
changed: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : restart systemd-timesyncd]
*****
changed: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : enable systemd-timesyncd
service and assure it is started] ***
ok: [agent1.astra.lan]

PLAY RECAP
*****
agent1.astra.lan : ok=7 changed=3 unreachable=0 failed=0
```

## systemd-timesyncd Ansible

### 1.

```
sudo apt install ansible-role-idiv-biodiversity-systemd-timesyncd
```

## 2. Ansible- *configure-systemd\_timesyncd.yml*

### configure-systemd\_timesyncd.yml

```
---
- hosts: all
  become: yes
  roles:
    - role: idiv-biodiversity.systemd_timesyncd
      vars:
        system_timezone: Europe/Moscow
        ntp_servers:
          - "ntp1.vniiftri.ru"
        ntp_fallback_servers:
          - "0.ru.pool.ntp.org"
          - "1.ru.pool.ntp.org"
          - "2.ru.pool.ntp.org"
          - "3.ru.pool.ntp.org"
      tags:
        - systemd-timesyncd
```

:

1. system\_timezone — ;
2. ntp\_servers — NTP-;
3. ntp\_fallback\_servers — NTP-.

ansible-:

1. timezone — , ;
2. systemd-timesyncd — */etc/systemd/timesyncd.conf* ;
3. service, service-timesyncd timesyncd-service — .

## 3.

### ansible-playbook configure-systemd\_timesyncd.yml

```
PLAY [all]
*****

TASK [setup]
*****
ok: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : set time zone]
*****
ok: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : remove unneeded ntp clients]
*****
changed: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : install systemd]
*****
ok: [agent1.astra.lan]
```

```

TASK [idiv-biodiversity.systemd_timesyncd : configure systemd-timesyncd]
*****
changed: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : restart systemd-timesyncd]
*****
changed: [agent1.astra.lan]

TASK [idiv-biodiversity.systemd_timesyncd : enable systemd-timesyncd
service and assure it is started] ***
ok: [agent1.astra.lan]

PLAY RECAP
*****
agent1.astra.lan : ok=7 changed=3 unreachable=0 failed=0

```

## OpenNTPd Ansible

1.

```
sudo apt install ansible-role-trombik-openntpd
```

## 2. Ansible- *configure-openntpd.yml*

### configure-openntpd.yml

```

---
- hosts: all
  become: yes
  roles:
    - role: trombik.openntpd
      vars:
        openntpd_flags: -s
        openntpd_config: |
          servers ntpl.vniiftri.ru
          sensor *
          constraints from "https://www.google.com"

```

:

1. openntpd\_flags — ntpd;
2. openntpd\_config — */etc/openntpd/ntpd.conf*.

3.

```

PLAY [all]
*****

TASK [setup]
*****
ok: [agent1.astra.lan]

```

```
TASK [trombik.openntpd : Include OS-specific variables.]
*****
skipping: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Include OS-specific variables (AstraLinux).]
*****
ok: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Include OS-specific install.]
*****
skipping: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Install openntpd]
*****
changed: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Create /etc/default/openntpd]
*****
changed: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Enable openntpd]
*****
ok: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Create ntpd.conf]
*****
changed: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Start openntpd]
*****
ok: [agent1.astra.lan]
```

```
TASK [trombik.openntpd : Restart openntpd at the end of the role]
*****
changed: [agent1.astra.lan]
```

```
RUNNING HANDLER [trombik.openntpd : Restart openntpd]
*****
changed: [agent1.astra.lan]
```

PLAY RECAP

```
*****  
agent1.astra.lan : ok=9 changed=5 unreachable=0 failed=0
```

## Puppet

### 1. Puppet Server

```
sudo apt install puppetserver  
sudo ufw allow 8140  
sudo systemctl enable puppetserver  
sudo systemctl start puppetserver
```

### 2. Puppet Agent

```
sudo apt install puppet-agent
```

*/etc/puppetlabs/puppet/puppet.conf/ main :*

```
server = master.astra.lan  
show_diff = true
```

```
sudo systemctl enable puppet  
sudo systemctl start puppet
```

### 3.

```
sudo /opt/puppetlabs/bin/puppetserver ca sign --certname agent1.astra.lan
```

### 4.

```
sudo systemctl stop puppet  
sudo /opt/puppetlabs/bin/puppet agent --test  
sudo systemctl start puppet
```

## NTP Puppet

### 1.

```
sudo apt install puppet-module-puppetlabs-ntp
```

### 2. /

```
sudo nano /etc/puppetlabs/code/environments/production/manifests/site.pp
```

**/etc/puppetlabs/code/environments/production/manifests/site.pp**

```
node default {
  class { 'ntp':
    servers => [ 'ntp1.vniiftri.ru', 'ntp2.vniiftri.ru' ],
    restrict => [
      'default ignore',
      '-6 default ignore',
      '127.0.0.1',
      '-6 ::1'
    ],
  }
}
```

:

1. servers – NTP;
2. restrict – .

### 3.

```
sudo /opt/puppetlabs/bin/puppet agent --test
```

```
Info: Using configured environment 'production'
Info: Retrieving pluginfacts
Info: Retrieving plugin
...
Info: Computing checksum on file /etc/ntp.conf
Info: /Stage[main]/Ntp::Config/File[/etc/ntp.conf]: Filebucketed /etc/ntp.conf to puppet with sum 46220696b8e1a45932533296bddeabc9
Notice: /Stage[main]/Ntp::Config/File[/etc/ntp.conf]/content: content changed '{md5}46220696b8e1a45932533296bddeabc9' to '{md5}093a967a0f58919dd8ba4f7e67feba94'
Info: Class[Ntp::Config]: Scheduling refresh of Class[Ntp::Service]
Info: Class[Ntp::Service]: Scheduling refresh of Service[ntp]
Notice: /Stage[main]/Ntp::Service/Service[ntp]/ensure: ensure changed 'stopped' to 'running'
Info: /Stage[main]/Ntp::Service/Service[ntp]: Unscheduling refresh on Service[ntp]
Notice: Applied catalog in 0.73 seconds
```

systemd-timesyncd Puppet

### 1.

```
sudo apt install puppet-module-camptocamp-systemd
```

### 2./

```
sudo nano /etc/puppetlabs/code/environments/production/manifests/site.pp
```



```
/etc/puppetlabs/code/environments/production/manifests/site.pp
```

```
node default {  
  class{'systemd':  
    manage_timesyncd => true,  
    ntp_server => ['ntp1.vniiftri.ru', 'ntp2.vniiftri.ru'],  
    fallback_ntp_server => ['0.ru.pool.ntp.org', '1.ru.pool.ntp.org', '2.ru.pool.ntp.org', '3.ru.pool.ntp.org'],  
  }  
}
```

:

1. manage\_timesyncd - */etc/systemd/timesyncd.conf*;
2. ntp\_server - NTP-;
3. fallback\_ntp\_server - NTP-.

3.

```
sudo /opt/puppetlabs/bin/puppet agent --test
```

```
Info: Using configured environment 'production'  
Info: Retrieving pluginfacts  
Info: Retrieving plugin  
...  
Info: Retrieving locales  
Info: Loading facts  
Info: Caching catalog for agent1.astra.lan  
Info: Applying configuration version '1586530810'  
Notice: /Stage[main]/Systemd::Timesyncd/Ini_setting[ntp_server]/ensure:  
created  
Info: /Stage[main]/Systemd::Timesyncd/Ini_setting[ntp_server]: Scheduling  
refresh of Service[systemd-timesyncd]  
Notice: /Stage[main]/Systemd::Timesyncd/Ini_setting[fallback_ntp_server]  
/ensure: created  
Info: /Stage[main]/Systemd::Timesyncd/Ini_setting[fallback_ntp_server]:  
Scheduling refresh of Service[systemd-timesyncd]  
Notice: /Stage[main]/Systemd::Timesyncd/Service[systemd-timesyncd]/ensure:  
ensure changed 'stopped' to 'running'  
Info: /Stage[main]/Systemd::Timesyncd/Service[systemd-timesyncd]:  
Unscheduled refresh on Service[systemd-timesyncd]  
Notice: Applied catalog in 0.20 seconds
```

## OpenNTPd Puppet

1.

```
sudo apt install puppet-module-tohuwabohu-openntp
```

2./

```
sudo nano /etc/puppetlabs/code/environments/production/manifests/site.pp
```

```
/etc/puppetlabs/code/environments/production/manifests/site.pp
```

```
node default {  
  class { 'openntp':  
    server => ['ntp1.vniiftri.ru']  
  }  
}
```

:

1. server – NTP-.

3.

```
sudo /opt/puppetlabs/bin/puppet agent --test
```

```
Info: Using configured environment 'production'  
Info: Retrieving pluginfacts  
Info: Retrieving plugin  
Info: Retrieving locales  
Info: Loading facts  
Info: Caching catalog for agent1.astra.lan  
Info: Applying configuration version '1587724838'  
Notice: /Stage[main]/Openntp::Install/Package[openntpd]/ensure: created  
...  
Info: Computing checksum on file /etc/openntpd/ntpd.conf  
Info: /Stage[main]/Openntp::Config/File[/etc/openntpd/ntpd.conf]:  
Filebucketed /etc/openntpd/ntpd.conf to puppet with sum  
d79975ee6ca862279de0f4d8d68833f6  
Notice: /Stage[main]/Openntp::Config/File[/etc/openntpd/ntpd.conf]/content:  
content changed '{md5}d79975ee6ca862279de0f4d8d68833f6' to '{md5}  
9560617a8c9371f531b636abb542aa8a'  
Info: Class[Openntp::Config]: Scheduling refresh of Class[Openntp::Service]  
Info: Class[Openntp::Service]: Scheduling refresh of Service[openntpd]  
Notice: /Stage[main]/Openntp::Service/Service[openntpd]: Triggered  
'refresh' from 1 event  
Notice: Applied catalog in 3.24 seconds
```

linuxptp Puppet

1.

```
sudo apt install puppet-module-zshi-redhat-ntp
```

2. /

```
sudo nano /etc/puppetlabs/code/environments/production/manifests/site.pp
```

```
/etc/puppetlabs/code/environments/production/manifests/site.pp
```

```
node default {  
  ptp::instance_ptp4l { 'instance_name':  
    ptp4l_interface => 'eth0',  
  }  
}
```

:

1. ptp4l\_interface - .

3.

```
sudo /opt/puppetlabs/bin/puppet agent --test
```

```
Info: Using configured environment 'production'  
Info: Retrieving pluginfacts  
Info: Retrieving plugin  
...  
Info: Retrieving locales  
Info: Caching catalog for agent1.astra.lan  
Info: Applying configuration version '1586533343'  
Notice: /Stage[main]/Ptp::Config/File[ptp4l@.service]/ensure: defined  
content as '{md5}2aa1dd119bc191e4843ad67c48370679'  
Notice: /Stage[main]/Ptp::Config/File[phc2sys@.service]/ensure: defined  
content as '{md5}8eb0cd481eb55055b5f466b6de987b25'  
Info: Class[Ptp::Config]: Scheduling refresh of Class[Ptp::Service]  
Notice: /Stage[main]/Main/Node[default]/Ptp::Instance_ptp4l[instance_name]  
/File[ptp4l-instance_name-eth0.conf]/ensure: defined content as '{md5}  
31422fb72702c7265a822c8ed78782f3'  
Notice: /Stage[main]/Main/Node[default]/Ptp::Instance_ptp4l[instance_name]  
/Service[instance_name]/ensure: ensure changed 'stopped' to 'running'  
Info: /Stage[main]/Main/Node[default]/Ptp::Instance_ptp4l[instance_name]  
/Service[instance_name]: Unscheduling refresh on Service[instance_name]  
Notice: Applied catalog in 0.49 seconds
```