AUTOMATED & EFFICIENT INSTALLATION OF AQMS

ANSIBLE FLOW
- plays are the basic commands
- playbooks are collections of plays
- deployments are collections of playbooks

WORKFLOW SUMMARY
- setup controller node
- provision systems
- configure options
- deploy to host nodes

MANAGE CONFIGURATIONS USING GIT
- checkout provides base distribution
- branch captures deviations
- pull via access tokens
- push via user credentials
- merge performs updates
- diff visualizes changes
- log provides history

UPDATE METADATA USING UTILITIES
- stnxml2aqms to populate metadata tables
- SQL scripts to populate additional tables
- ewconfig to generate config files
- ewconfig-revisions.sh to specify deviations

ADMINISTER SYSTEMS USING MODERN TOOLS
- systemd to manage services
- firewalld to manage access
- cron to manage scheduling
- yum/dnf to manage system updates
- conda/pip to manage python updates
- ansible to manage software updates

ANALYZE RESULTS USING APIS & GUIS
- dbselect for command line interaction
- FDSNWS APIs for remote interaction
- Jiggle/DRP for analyst review
- AQMS alarms for notifications
- PDL for distribution

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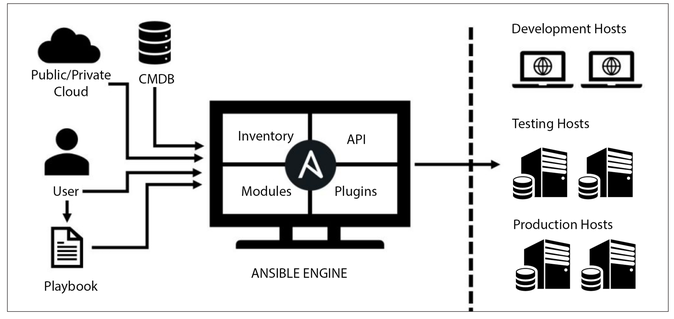
Improving efficiency by using automation tools to install and configure complex seismic systems.




```
- name: Checkout distro from repo
  git:
    repo: "https://{{ token }}@{{ aqms_repo }}"
    dest: "/aqms/"
    version: "{{ aqms_branch }}"
    force: no
```

COMMUNITY COLLABORATION
- gitlab.isti.com
- gitlab.com/seismic-software
- gitlab.com/aqms-swg
- github.com/pnsn
- github.com/EarthScope
- github.com/usgs
- volcanoes.usgs.gov

OPEN SOURCE PACKAGES
- Rocky Linux 8
- RHEL 8
- Postgres 14
- PostGIS 3.2
- MariaDB 10
- Anaconda 3.9
- Apache 2.4
- Tomcat 9.0
- Java 1.8

ADDITIONAL PLAYBOOKS
- dataselect
- ewave
- eqkportal
- ezw
- hypodd
- phaseworm
- ringserver
- shakemap
- snw
- telegraf

COMING SOON
- metadata playbook
- eqk-notification tool
- systemd for individual aqms modules
- Rocky and RHEL 9, Postgres 15 support