Build library

Build library basic example

```
- name: Build library source and wheel artifacts
  uses: ansys/actions/build-library@v8.2
  with:
    library-name: ansys-<product>-<library>
```

Ref: Build library basic example

Doc build

Building library documentation

```
- name: Run Ansys documentation building action
  uses: ansys/actions/doc-build@v8.2
```

Ref: Building library documentation

Installing additional system dependencies for building documentation

```
- name: Run Ansys documentation building action
  uses: ansys/actions/doc-build@v8.2
  with:
    dependencies: graphviz mermaid-cli
```

Ref: Installing additional system dependencies for building documentation

Building library documentation that using xvfb

```
- name: Run Ansys documentation building action
  uses: ansys/actions/doc-build@v8.2
  with:
    requires-xvfb: true
```

Ref: Building library documentation that using XVFB

Docker style

Docker style

```
- uses: ansys/actions/docker-style@v8.2
  with:
    directory: docker
    error-level: 1
    recursive: true
```

Ref: Docker style

Check pr title

Check pull-request title follows conventional commits

```
- uses: ansys/actions/check-pr-title@v8.2
  with:
    token: ${{ secrets.GITHUB_TOKEN }}
```

Ref: Check pull-request title follows conventional commits

Doc deploy stable

Deploy stable documentation

```
- name: Deploy the stable documentation
  uses: ansys/actions/doc-deploy-stable@v8.2
  with:
    bot-email: ${{ secrets.PYANSYS_CI_BOT_EMAIL }}
    bot-user: ${{ secrets.PYANSYS_CI_BOT_USERNAME
      }}
    cname: <library>.docs.pyansys.com
    token: ${{ secrets.GITHUB_TOKEN }}
```

Ref: Deploy stable documentation

Release github

Release to github

```
- name: Release to GitHub
  uses: ansys/actions/release-github@v8.2
  with:
    library-name: ansys-<product>-<library>
```

Ref: Release to GitHub

Check vulnerabilities

Check library vulnerabilities

```
- uses: ansys/actions/check-vulnerabilities@v8.2
  with:
    dev-mode: ${{ github.ref != "refs/heads/main"
      }}
    python-package-name: ansys-<product>-<library>
    python-version: ${{ env.MAIN_PYTHON_VERSION }}
    token: ${{ secrets.PYANSYS_CI_BOT_TOKEN }}
```

Ref: Check library vulnerabilities

Build wheelhouse

Build wheelhouse for latest python versions

```
- name: Build a wheelhouse of the Python library
  uses: ansys/actions/build-wheelhouse@v8.2
  with:
    library-name: <ansys-product-library>
    operating-system: ${{ matrix.os }}
    python-version: ${{ matrix.python-version }}
```

Ref: Build wheelhouse for latest Python versions

Doc deploy dev

Deploy developers documentation

```
- name: Deploy the latest documentation
  uses: ansys/actions/doc-deploy-dev@v8.2
  with:
    bot-email: ${{ secrets.PYANSYS_CI_BOT_EMAIL }}
    bot-user: ${{ secrets.PYANSYS_CI_BOT_USERNAME
      }}
    cname: <library>.docs.pyansys.com
    token: ${{ secrets.GITHUB_TOKEN }}
```

Ref: Deploy developers documentation

Hk package clean except

Perform versions cleanup - except certain tags

```
- name: Perform versions cleanup - except certain
    tags
  uses: ansys/actions/hk-package-clean-except@v8.2
  with:
    package-name: mypackage
    tags-kept: latest, latest-unstable
    token: ${{ secrets.GITHUB_TOKEN }}
```

Ref: Perform versions cleanup - except certain tags

Release pypi private

Release to private pypi

```
- name: Release to the private PyPI repository
  uses: ansys/actions/release-pypi-private@v8.2
  with:
    library-name: ansys-<product>-<library>
    twine-token: ${{
      secrets.PYANSYS_PYPI_PRIVATE_PAT }}
    twine-username: __token__
```

Ref: Release to private PyPI

Release pypi public

Release to public pypi

```
- name: Release to the public PyPI repository
  uses: ansys/actions/release-pypi-public@v8.2
  with:
    library-name: ansys-<product>-<library>
    twine-token: ${{ secrets.PYPI_TOKEN }}
    twine-username: __token__
```

Ref: Release to public PyPI

Hk automerge prs

Automerging dependabot and pre-commit.ci prs

```
- name: Automerging dependabot and pre-commit.ci
    PRs
  uses: ansys/actions/hk-automerge-prs@v8.2
  with:
    approver: ${{ secrets.PYANSYS_CI_BOT_USERNAME
      }}
    approver-token: ${{
      secrets.PYANSYS_CI_BOT_TOKEN }}
```

Ref: Automerging dependabot and pre-commit.ci PRs

Doc style
Running documentation style checks

```
- name: Running documentation style checks
  uses: ansys/actions/doc-style@v8.2
  with:
    token: ${{ secrets.GITHUB_TOKEN }}
```

Ref: [Running documentation style checks](#)

Tests pytest
Optimized testing with different operating systems and python versions

```
- name: Login into the GitHub container registry
  uses: docker/login-action@v2.1.0
  with:
    password: ${{ secrets.GITHUB_TOKEN }}
    registry: ghcr.io
    username: ${{ secrets.GH_USERNAME }}
- env:
    LICENSE_SERVER: ${{ secrets.LICENSE_SERVER }}
  name: Pull, launch and verify desired Ansys
      service
  run: '...'
- name: Run pytest with desired markers and extra
    arguments
  uses: ansys/actions/tests-pytest@v8.2
  with:
    pytest-extra-args: ${{ matrix.cfg.extra-args }}
    pytest-markers: ${{ matrix.cfg.markers }}
    requires-xvfb: true
```

Ref: [Optimized testing with different operating systems and Python versions](#)

Testing library with different operating systems and python versions

```
- name: Run pytest
  uses: ansys/actions/tests-pytest@v8.2
  with:
```

```
    pytest-extra-args: --cov=ansys.<library>
        --cov-report=term
        --cov-report=html:.cov/html
    pytest-markers: -k 'mocked'
```

Ref: [Testing library with different operating systems and Python versions](#)

Code style
Running code style checks

```
- name: Run PyAnsys code style checks
  uses: ansys/actions/code-style@v8.2
```

Ref: [Running code style checks](#)

Doc deploy changelog
Update changelog for new tag

```
- uses: ansys/actions/doc-deploy-changelog@v8.2
  with:
    bot-email: ${{ secrets.PYANSYS_CI_BOT_EMAIL }}
    bot-user: ${{ secrets.PYANSYS_CI_BOT_USERNAME
        }}
    token: ${{ secrets.PYANSYS_CI_BOT_TOKEN }}
```

Ref: [Update CHANGELOG for new tag](#)

Hk package clean untagged
Perform untagged versions cleanup

```
- name: Perform untagged versions cleanup
  uses:
      ansys/actions/hk-package-clean-untagged@v8.2
  with:
    package-name: mypackage
    token: ${{ secrets.GITHUB_TOKEN }}
```

Ref: [Perform untagged versions cleanup](#)

Check licenses
Check library dependencies ship with valid licenses

```
- name: Validate third party licenses
  uses: ansys/actions/check-licenses@v8.2
  with:
    python-version: ${{ env.MAIN_PYTHON_VERSION }}
```

Ref: [Check library dependencies ship with valid licenses](#)

Build ci wheels
Build a c-extension library

```
- name: Build a C-extension library wheel artifacts
  uses: ansys/actions/build-ci-library@v8.2
```

Ref: [Build a C-extension library](#)

Release pypi test
Release to test pypi

```
- name: Release to the test PyPI repository
  uses: ansys/actions/release-pypi-test@v8.2
  with:
    library-name: ansys-<product>-<library>
    twine-token: ${{ secrets.PYANSYS_PYPI_TEST_PAT
        }}
    twine-username: __token__
```

Ref: [Release to test PyPI](#)

Doc changelog
Create changelog fragment

```
- uses: ansys/actions/doc-changelog@v8.2
  with:
    bot-email: ${{ secrets.PYANSYS_CI_BOT_EMAIL }}
    bot-user: ${{ secrets.PYANSYS_CI_BOT_USERNAME
        }}
    token: ${{ secrets.PYANSYS_CI_BOT_TOKEN }}
```

Ref: [Create changelog fragment](#)