ecFlow

Final thoughts

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ECMWF

How to install ecFlowUI on MacOS and Linux (brew)

- Homebrew: **brew install ecflow-ui** (note: UI only!)

```
Iains-MacBook-Pro-2:~ % brew install ecflow-ui
==> Downloading https://formulae.brew.sh/api/cask.jws.json

==> Fetching ecflow-ui
==> Downloading https://ghcr.io/v2/homebrew/core/ecflow-ui/manifests/5.10.0
Already downloaded: /Users/cgi/Library/Caches/Homebrew/downloads/edd5d1d7b0f
==> Downloading https://ghcr.io/v2/homebrew/core/ecflow-ui/blobs/sha256:3db5
Already downloaded: /Users/cgi/Library/Caches/Homebrew/downloads/35ee657f615
==> Pouring ecflow-ui--5.10.0.arm64_monterey.bottle.tar.gz
🍺  /opt/homebrew/Cellar/ecflow-ui/5.10.0: 40 files, 23.3MB
==> Running `brew cleanup ecflow-ui`...
Disable this behaviour by setting HOMEBREW_NO_INSTALL_CLEANUP.
Hide these hints with HOMEBREW_NO_ENV_HINTS (see `man brew`).
Iains-MacBook-Pro-2:~ %
Iains-MacBook-Pro-2:~ %
Iains-MacBook-Pro-2:~ % ecflow_ui &
```

How to install ecFlow on MacOS and Linux (conda)

- Homebrew: **conda install ecflow -c conda-forge** (server, client and UI)

```
(work) Iains-MacBook-Pro-2:~ % conda install ecflow -c conda-forge
Collecting package metadata (current_repodata.json): done
Solving environment: done
```

```
The following packages will be downloaded:

    package                    |            build
    ---------------------------|-----------------
    ecflow-5.10.0              |  py310h8344b3d_0         9.7 MB  conda-forge
    gst-plugins-base-1.22.0    |       h8b7775e_2         1.8 MB  conda-forge
    gstreamer-1.22.0           |       hcb7b3dd_2         1.3 MB  conda-forge
    krb5-1.20.1                |       h69eda48_0         1.0 MB  conda-forge
    libclang-14.0.6            |default_hf5194b7_0         129 KB
```

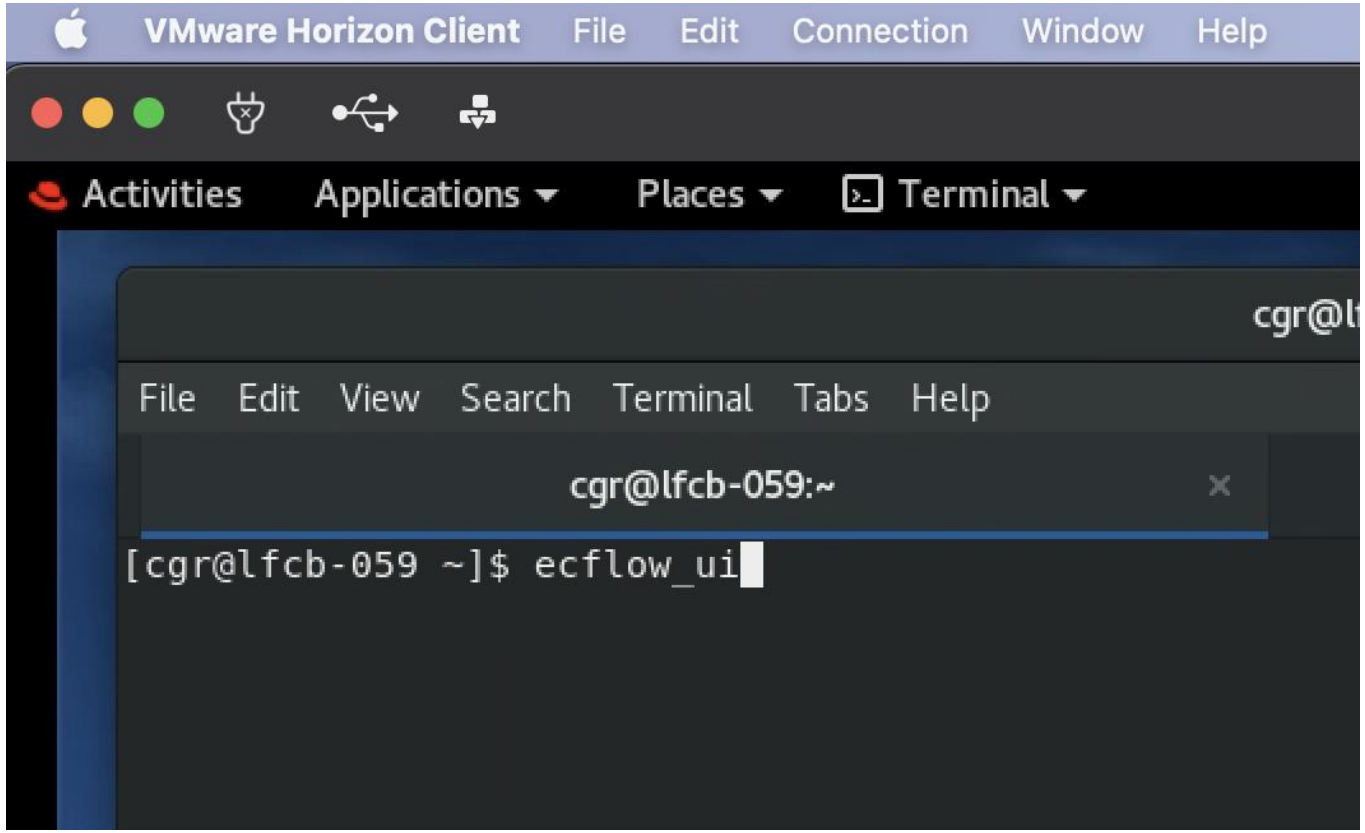
```
Executing transaction: done
(work) Iains-MacBook-Pro-2:~ %
(work) Iains-MacBook-Pro-2:~ % ecflow_ui &
```

Build ecFlow from source

- C++ code, builds on Linux and MacOS
- Dependencies: CMake, boost, Qt (for UI only), openssl (optional), python (optional)
- Download source from:
  - https://github.com/ecmwf/ecflow (GitHub source, requires ecBuild, also from ECMWF)
  - https://confluence.ecmwf.int/display/ECFLOW/Releases (source tarball, includes ecBuild)

Accessing ECMWF servers: from the VDI

- Linux VDI: **desktop.ecmwf.int**
- Just type **ecflow_ui** or **ecflow_client**
- There is only one version installed, no module selection available:



Accessing ECMWF servers: directly from the Atos

- Multiple versions installed and available through the module system

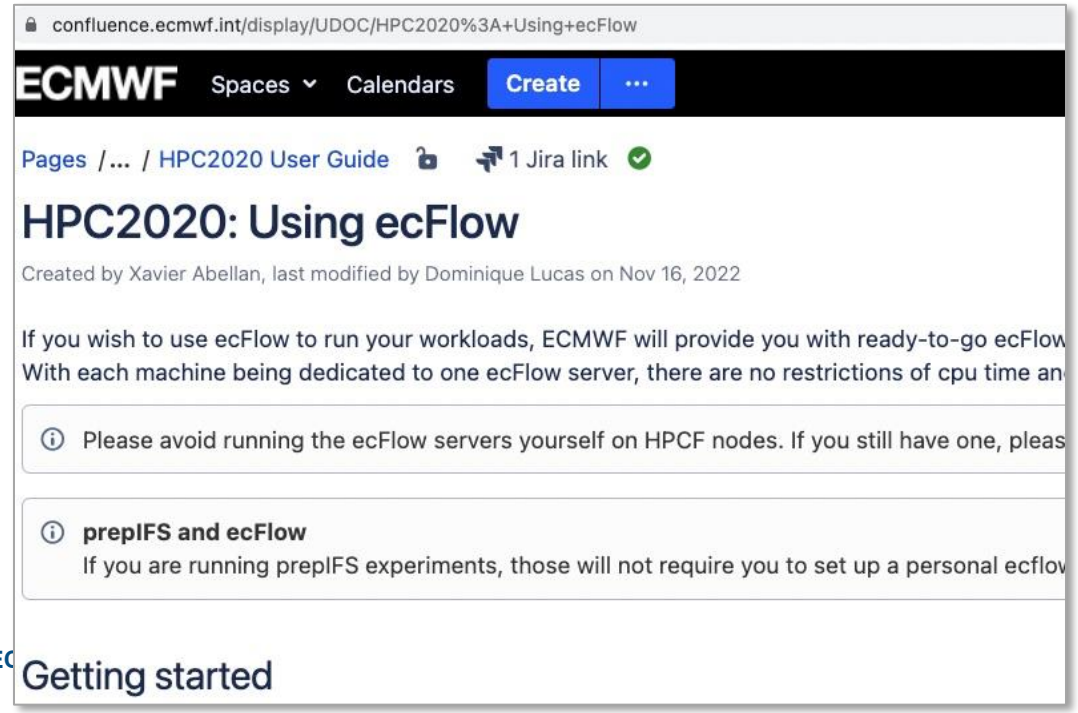
```
cgi@aa6-206:~>module avail ecflow

------------------------------------------------------------------------------------------ Global Aliases ---------------------
--------------------------------


------------------------------------------------------------------------------ /usr/local/apps/modulefiles/lmod/core ----------
--------------------------------
   ecflow/5.7.0 (D:prepifs)    ecflow/5.7.3    ecflow/5.8.1    ecflow/5.9.0    ecflow/5.9.1    ecflow/5.9.2    ecflow/5.10.0 (5new:new)
```

```
cgi@aa6-206:~>module load ecflow/new
```

- VDI is recommended way to invoke the UI
- See Confluence pages for details on how to set up an ecFlow server at ECMWF



Accessing remote servers: from your personal computer

- Install ecFlow or ecFlowUI and proxychains
- Follow the instructions here:
  - https://ecflow.readthedocs.io/en/latest/ug/ecflow_ui/using_ecflowui_via_the_ecmwf_teleport_gateway.html

Using ecFlowUI via the ECMWF Teleport gateway

You can use the native ecFlowUI client on your End User device to access remote servers via an SSH tunnel. The recommended way is using dynamic port forwarding.

Dynamic port forwarding

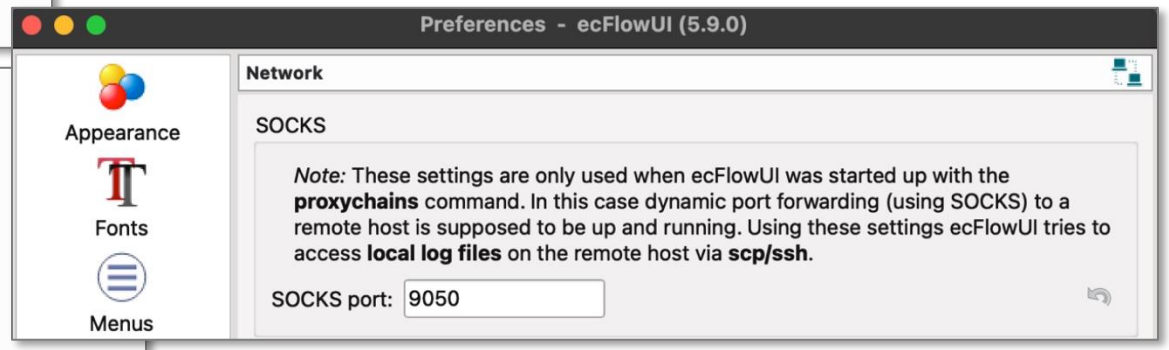
Authenticate via teleport

First you need to authenticate via Teleport on your End User device.

Set up dynamic port forwarding

The next step is to start dynamic port forwarding using the SOCKS (Secure Socket) protocol. Let us suppose the target host you want to access is hpc-login. In a terminal on your End User device type:

```
ssh -v -C -N -D 9050 -J myecuser@jump.ecmwf.int myecuser@hpc-login
```



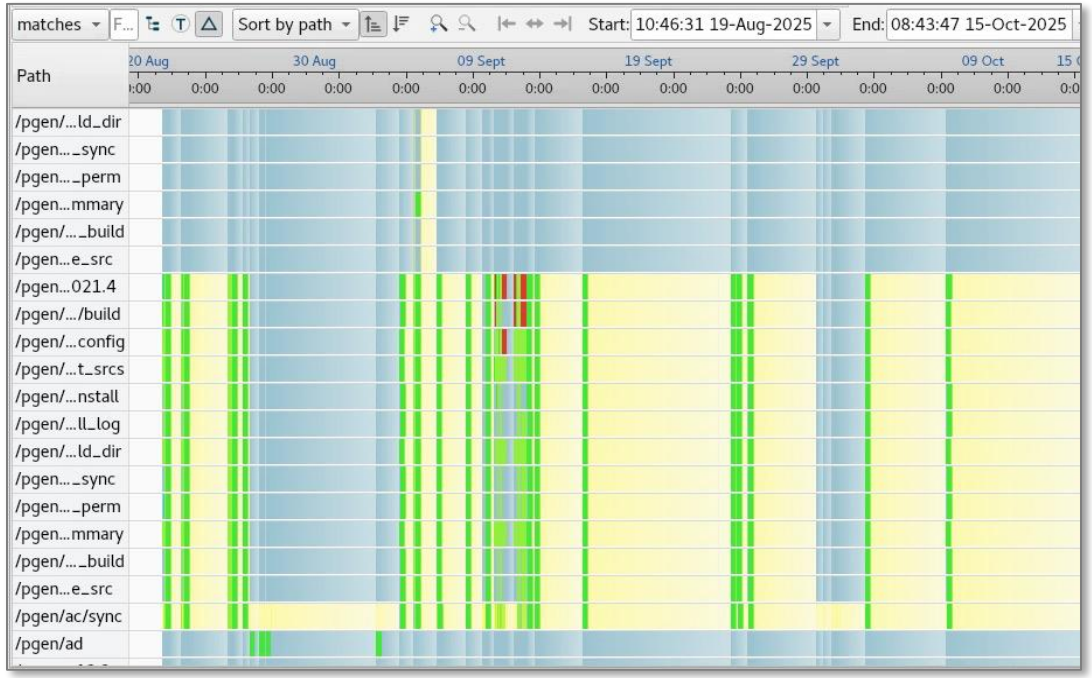
And...

- Many more things we have not covered in this course, including:

- Zombies!

- Advanced security

- Triggers from external entities
  - Other ecFlow servers
  - Aviso servers



- Timeline and server status panels in ecFlowUI

Thank you!

- https://ecflow.readthedocs.io/
- https://github.com/ecmwf/ecflow/