



New in NetworKit - Under the Hood

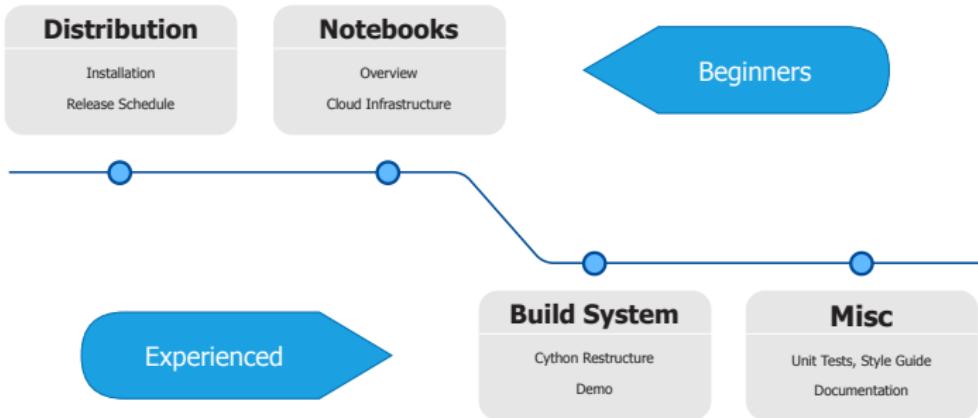
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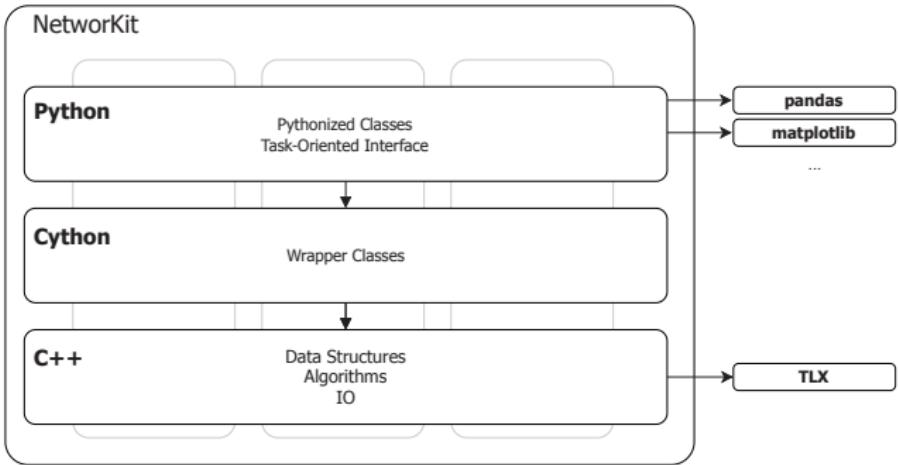
A dark blue background featuring a network graph with numerous small, light-colored circular nodes connected by thin lines. A larger, central node is highlighted with a white circle. Overlaid on this network is a white rectangular box containing the text 'NetworKit Day 2020' in a large, bold, white sans-serif font.

NetworKit Day 2020

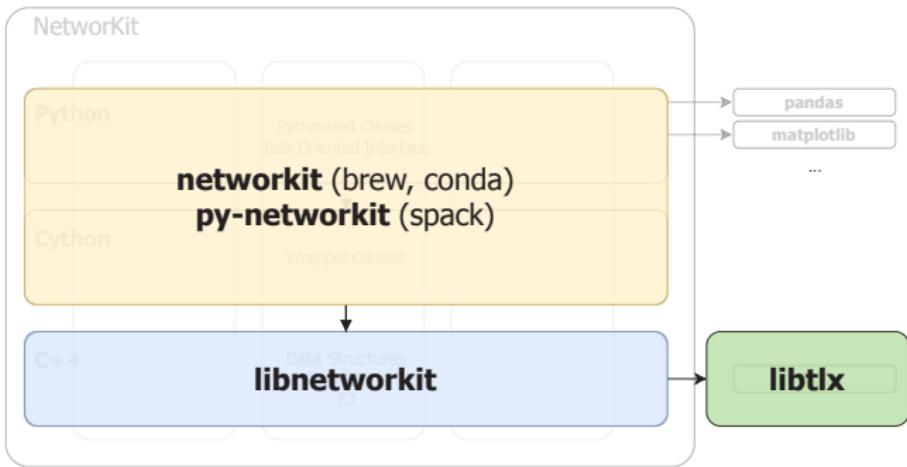
What to expect



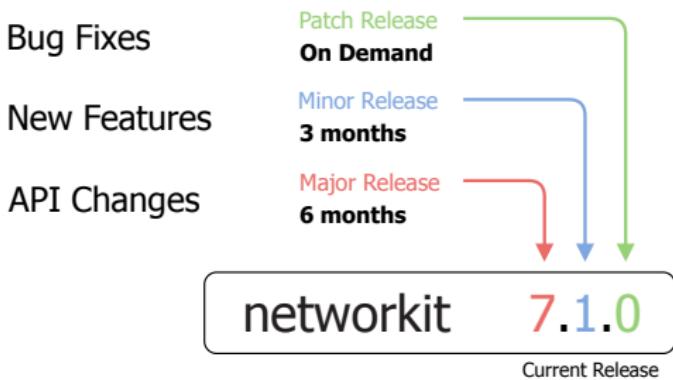
Installation: pip3



Installation: spack — conda — brew



Release Schedule



Jupyter Notebooks

Static Renderings

<https://networkkit.github.io/dev-docs/notebooks.html>



Self-Hosted Playground

minimal example



```
> python3 -m venv jupyterenv && . jupyterenv/bin/activate
> pip3 install --upgrade pip
> pip3 install --quiet Cython networkkit jupyter
> git clone https://github.com/networkkit/networkkit && cd networkkit
> jupyter notebook notebooks
[13:44:27.881 NotebookApp] JupyterLab extension loaded from /usr/local/anaconda3/lib/python3.7/site-packages/jupyterlab
[13:44:27.881 NotebookApp] JupyterLab application directory is /usr/local/anaconda3/share/jupyter/lab
[13:44:27.884 NotebookApp] Serving notebooks from local directory: /Users/fbt/networkkit/
[13:44:27.884 NotebookApp] The Jupyter Notebook is running at:
[13:44:27.884 NotebookApp] http://localhost:8888/?token=cc83888ec2723e34c83846644298fbac
[13:44:27.884 NotebookApp] or http://127.0.0.1:8888/?token=cc83888ec2723e34c83846644298fbac
[13:44:27.884 NotebookApp] Use Control-C to stop this server and shut down all kernels!
[< 13:44:27.876 NotebookApp]
```

Jupyter Notebook

NetworkKit is designed to provide a high level of interactivity to give the user the power of a network analysis tool which is easy to use. This is accomplished by providing a Python interactive Python shell. Complete workflows can be created with Jupyter Notebooks.

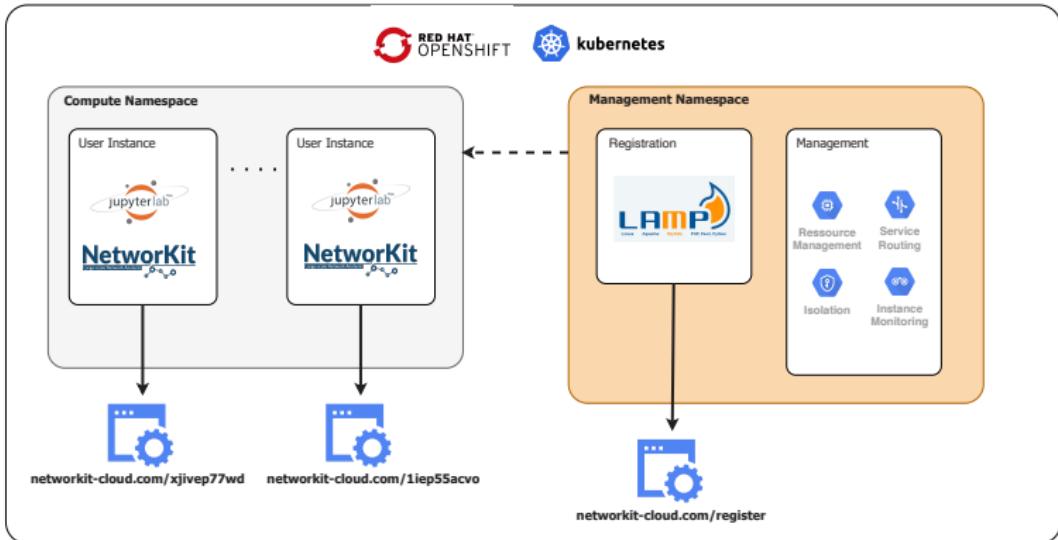
Tutorial Notebooks

We provide several example notebooks to get started with NetworkKit and Jupyter following. Links are static renderings of the notebooks illustrating NetworkKit's features.

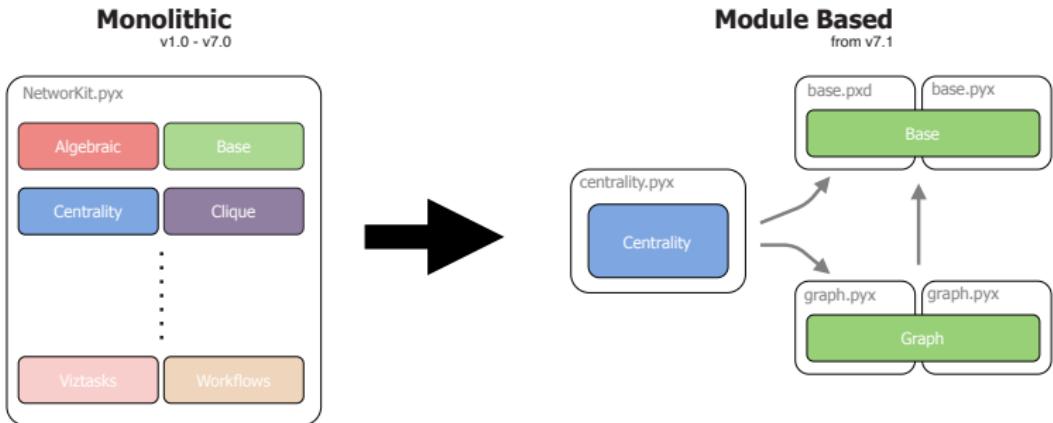
- NetworkKit User Guide
 - About NetworkKit
 - Introduction
 - Preparation
 - Reading and Writing Graphs
 - The Graph Object
 - Connected Components



NetworKit in the Cloud



Cython Build System



Youtube-Tutorials for NetworkKit: <https://bit.ly/3iZL55Z>

Unit Tests, Style Guides and more



and



Travis CI



Static Code Analysis

Styling Check

```
./check-code.sh
Include Guards
Indentation
clang-format

HEADER:
// networkkit-format

CONFIG:
.clang-format
```



Code Coverage

```
cmake -DNETWORKKIT_COVERAGE
```



Linter

```
cmake
-DNETWORKKIT_CLANG_TIDY

CONFIG:
 clang-tidy
```



Dynamic Code Analysis

Memory Leaks

```
cmake -DNETWORKKIT_WITH_SANITIZERS=leak
```



Unit Tests

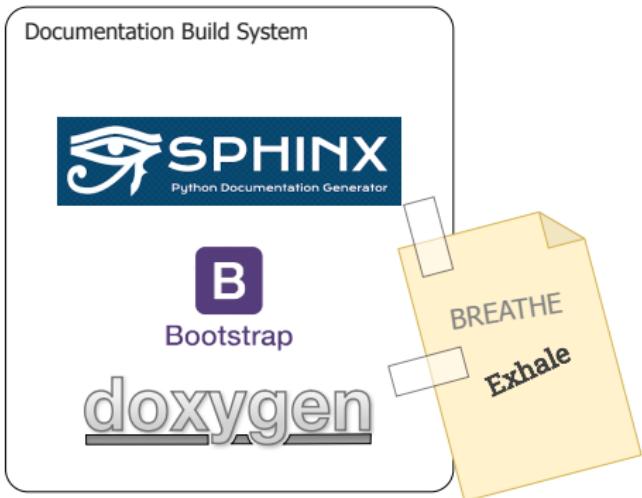
```
cmake -DNETWORKKIT_WITH_TESTS=ON
notebooks/test_notebooks.py
```



Documentation



Travis CI



Thanks!

