



New in NetworKit - Under the Hood

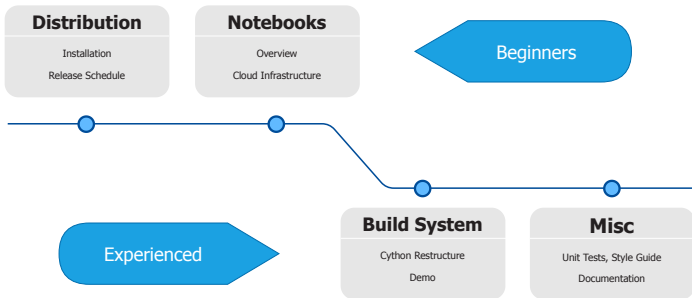
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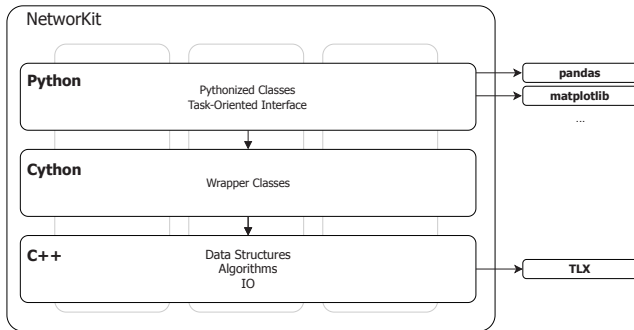
The background of the bottom section is a dark blue rectangle with a network diagram. It features numerous grey circular nodes of varying sizes connected by thin white lines, forming a complex web. A small cluster of four nodes is highlighted with white outlines. A white rectangular box with a thin border is centered horizontally, containing the text 'NetworKit Day 2020'.

NetworKit Day 2020

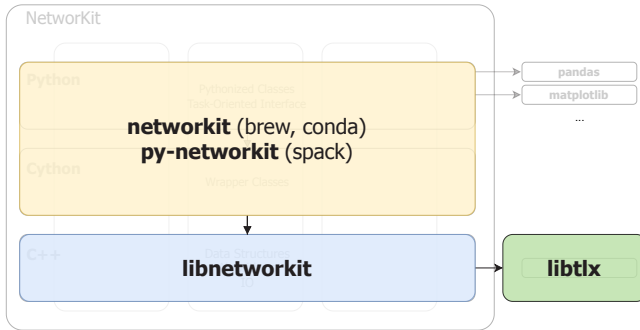
What to expect



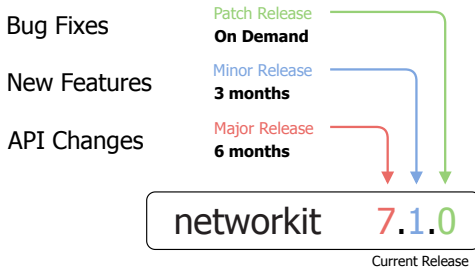
Installation: pip3



Installation: spack — conda — brew



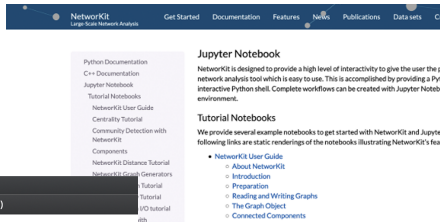
Release Schedule



Jupyter Notebooks

Static Renderings

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



Navigation links: NetworkKit, Get Started, Documentation, Features, News, Publications, Data sets, C++ Documentation, Jupyter Notebook, Tutorial Notebooks, NetworkKit User Guide, Centrality Tutorial, Community Detection with NetworkKit, Components, NetworkKit Distance Tutorial, NetworkKit Graph Generators, NetworkKit Tutorial, NetworkKit I/O tutorial, NetworkKit GitHub.

Jupyter Notebook

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

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 feat

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

Self-Hosted Playground

minimal example

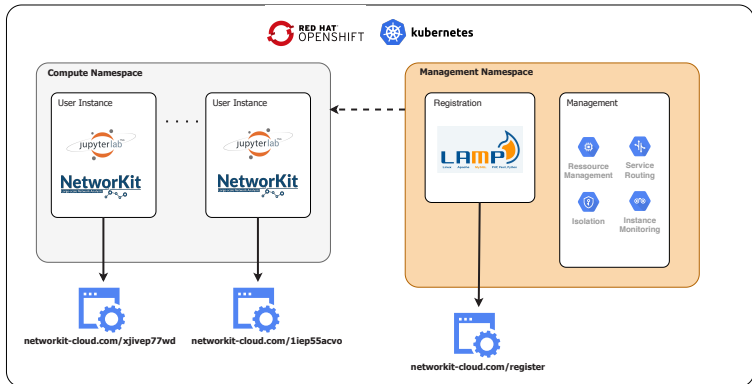
```
~ (zsh)

> python3 -m venv jupyterenv && . jupyterenv/bin/activate
> pip3 install --upgrade pip
> pip3 install --quiet Cython networkit jupyter
> git clone https://github.com/networkit/networkit && cd networkit
> jupyter notebook notebooks

[11:44:27.861 NotebookApp] JupyterLab extension loaded from /usr/local/anaconda3/lib/python3.7/site-packages/jupyterlab
[11:44:27.862 NotebookApp] JupyterLab application directory is /usr/local/anaconda3/share/jupyterlab
[11:44:27.864 NotebookApp] Serving notebooks from local directory: /Users/fbt/networkit/
[11:44:27.864 NotebookApp] The Jupyter Notebook is running at:
[11:44:27.864 NotebookApp] http://localhost:8888/?token=cc83888ec2723e36c838466462b8fba0
[11:44:27.864 NotebookApp] or http://127.0.0.1:8888/?token=cc83888ec2723e36c838466462b8fba0
[11:44:27.864 NotebookApp] Use Control-C to stop this server and shut down all kernels (
[11:44:27.876 NotebookApp]
```

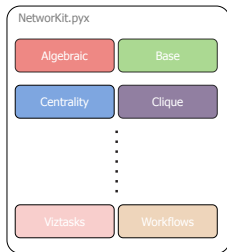


NetworkKit in the Cloud

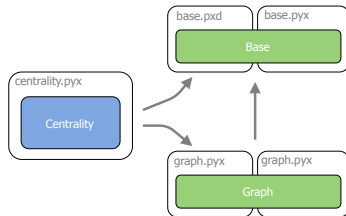


Cython Build System

Monolithic v1.0 - v7.0



Module Based from v7.1



Youtube-Tutorials for NetworkKit: <https://bit.ly/3iZL5SZ>

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
```



Lint

```
cmake
-DNETWORKKIT_CLANG_TIDY
```

```
CONFIG:
.clang-tidy
```



Dynamic Code Analysis

Memory Leaks

```
cmake -DNETWORKKIT_WITH_SANITIZERS=leak
```

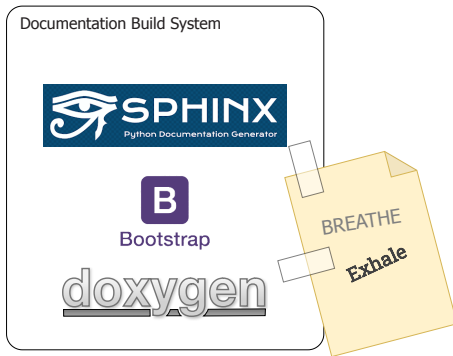


Unit Tests

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



Documentation



Thanks!

