NDN-Play

11th NDN Hackathon

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Hack Proposal

- Beginners to NDN have no easy means to try out NDN
- MiniNDN can be difficult to setup especially with limited resources
- People may not know how to configure NFD etc.
- Everyone has a web browser – use it
- Create a web interface to play with NDN
- Include a (dummy) forwarder and allow the user to write code in-browser and experiment
- Make NDN more accessible = Profit!

Caveat - What NDN-Play is NOT

- Not an emulator - no performance benchmarks please
- Not for running mainstream experiments

Implementation

- NDNts
- Angular
- Deployed on GitHub Pages (completely serverless)

What can it do?

- Create, configure and visualize network topologies
- Each node runs a forwarder
- Can run NDNts code on each node
- Editor with syntax completion [@yoursunny]
- Packet capture and inspection
- Traffic visualization

NFW (Not a Forwarder)

- Dumb
- Built on top of @ndn/fw
- All routes statically configured on prefix registration
- best-route and multicast strategies
- Content Store
- Interest Aggregation

Future Work

- Security visualization
- Run a real forwarder
- Connect to MiniNDN-style backend
- Compile TypeScript in browser (currently JS)

Demonstration

https://ndn-play.varunpatil.me/

https://github.com/pulsejet/ndn-play-ng