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# ProtoGENI RSpec Thoughts



# ProtoGENI RSpec (v2)

- Declarative, XML-based
  - Intended for maximum tooling support
- Extensible (using XML namespaces)
- Has “external references”
- Three types are related, not identical
  - Advertisement, request, manifest
- Progressive annotation

# Converting <-> PG RSpec

- PlanetLab
  - Should be quite easy, only difference is <site>
- ORCA NDL
  - Some impedance mismatch (extensions)
  - Already Written: RSpec -> NDL (requests)
- FlowSpace
  - More uncertain at this point

# RSpec Evolution Strategy

- Whoever maintains the format shouldn't be a bottleneck to innovation
- Define a standard base, evolve it over time
  - Services should advertise what version(s) they support
  - Bound the number of active versions, though
- “Consenting adults” model for new extensions
- Useful extensions eventually become “blessed” or make it into the base

# Examples of Extensions

- Emulab
  - We use it internally, adopted by a non-GENI user
- BGPmux
  - Spoken only by BGPmux users
- Stitching
  - Proposed strawman, would need to be widely spoken
- OpenFlow
  - This should be next target
- Proprietary