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Developer & Testing Forum



The journey of TransportPCE tests to RFC8040 support

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Reminders about TransportPCE tests

Mostly from [2022 presentation about tox parallelization](#)

- Black-box testing
 - based on python unittest and request libraries (no ODL core code)
 - Controller implementation agnostic (here OpenDaylight Karaf vs Lighty.io)
 - Most regular REST calls using requests are mutualized in a common library called “test_utils”
- Lots of tests
 - Concurrency support
 - Can be performed inside a python virtual environment through tox

Opinion / given direction

URL migration to RFC8040 is trivial but a problem with NS prepended in JSON payload

- Old (draft-bierman02) REST API must still be supported
 - the tests are designed to be used on any OpenROADM or TAPI implementation
 - Portability is a good design criteria: it ease future potential migration
- The level of mutualization / optimization must be reasonable
 - These tests are intended for optical experts. Most are not developers.
 - Of course, this criteria can be highly subjective
https://git.opendaylight.org/gerrit/c/transportpce/+98968/1/tests/transportpce_tests/common/test_utils_rfc8040.py
- Let's try to stick to the current design spirit
 - Though, this is a good occasion to do some refactoring !

Strategy used

With so many tests, the migration can not be achieved in one block.

- Make a copy of test_utils to test_utils_rfc8040
- Migrate separately each test suite to test_utils_rfc8040 and adapt the library progressively
 - The library embeds for each method 2 URLs (one per REST format)
 - The REST format can be chosen with an os environment variable
- Do some refactoring when it makes sense
 - e.g. API rpc ("/operations") mutualized
- Once every test suite has been migrated, remove test_utils and rename test_utils_rfc8040 to test_utils



Quick demo



Conclusion

- Sulfur release train was a good opportunity to bring more portability and robustness in TransportPCE tests design.
- Still many controller in the wild use the draft-bierman02 format. RFC8040 migration has to be seriously anticipated.

Thanks ! Questions?