

Functional Testing the LS

LSRegisterRequest:

1. Feeding requests that are well formatted with the required metadata and data. The LS has a stable connection with the database. The data end metadata included in the request should be visible in the eXist DB.
2. Feeding requests that are not well formatted with or without the required metadata and data. An error result code expected.
3. Feeding requests that are well formatted but not containing the required metadata and data(i.e access Point, service Type etc).One ,two or more fields could be missing. An error result code expected.

JZ: The distinction between requests having a single Metadata/Data pair as well as multiple Metadata/Data pairs should be attempted. Also the chaining of Metadata/Data elements together (via the ID fields) is very important. These should be tested for each of the 3 cases.

Will 're-registration' (not with a key necessarily) be covered in here (send the exact same registration information and looking for an update in the control information?)

LSUpdateRequest:

The former apply for the LSUpdateRequest as well. With the addition of:

1. Feeding well formatted requests with the correct key.
2. Feeding well formatted requests with a non existing key.An error result code expected.

JZ: Probably should test the update with a key and with the initial data (should produce the same response?).

LSDeregisterRequest:

1. Feeding well formatted requests with a valid key. The result of the request should be visible in the eXist DB.

JZ: It may not be a case we have dealt with, but do we need a key to de-register/register/update? It may be interesting to see as a 'corner case' for all of these instances what happens when we try the operation with valid keys and the corresponding valid initial data that produced a key.

2. Feeding well formatted requests with a non existing or no key at all. This should have no result on the DB at all. An error result code expected.

3. Feeding requests that are not well formatted, with or without a valid key. An error response code expected.

LSKeepaliveRequest:

1. Feeding well formatted requests with a valid key. The DB should be checked to verify the results.
2. Feeding well formatted requests with a non valid or no key at all. An error response code expected.
3. Feeding requests that are not well formatted with or without a valid key. An error response code expected.

LSQueryRequest:

1. Feeding well formatted requests with a valid XQuery or XPath expression, addressing existing data and metadata stored in the DB. The response results should match the results of the same XQuery or XPath expression directly to the DB.
2. Feeding well formatted requests that contain a valid XQuery or XPath expression addressing non existing data and metadata. The result should match the result of the same expression executed directly to the DB.
3. Feeding well formatted requests that contain a non valid XQuery or XPath expression addressing existing or non existing metadata and data. An error result code expected.
4. Feeding requests that are not well formatted with valid or non valid XQuery or XPath expressions, addressing existing or non existing metadata and data. An error result code is expected.
5. Feeding a large number of requests per second, in order to check the services performance, stability and robustness.
6. Feeding a large number of requests per second that combine the previous cases.

JZ: try changing the namespace to prefix mapping (i.e. we usually use 'nmwg' to map to the uri '<http://ggf.org/ns/nmwg/base/2.0/>', but the prefix could be defined to be anything in the xquery expression). Also I have seen various parts of the xquery/xpath languages that are in the standards but sometimes produce errors in eXist (implementation specific). We shouldn't test explicitly for this, but it may be nice to start building a 'cookbook' of known to work xquery expressions that can be published with releases.

LS general test:

1. Feeding requests asking for a different kind of service(i.e MA).An error result code is expected
2. Feeding requests when the connection between the LS and the DB is not available. An error result code is expected.